UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,142	03/25/2002	Timothy S. Lehner		2716

24241	7590	04/03/2006	

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INTELLECTUAL PROPERTY LAW
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EXAMINER
PROCTOR, JASON SCOTT

ART UNIT	PAPER NUMBER
2123	

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Interview Summary	Application No.	Applicant(s)
	10/063,142	LEHNER ET AL.
	Examiner	Art Unit	
	Jason Proctor	2123	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Jason Proctor*.

(3)*Tim Lehner*.

(2) *Riyon Harding (58,365)*.

(4)_____.

Date of Interview: *28 March 2006*.

Type: a)☒ Telephonic   b)☐ Video Conference
        c)☐ Personal [copy given to: 1)☐ applicant   2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes   e)☒ No.
    If Yes, brief description: _____.

Claim(s) discussed: *1 and 10*.

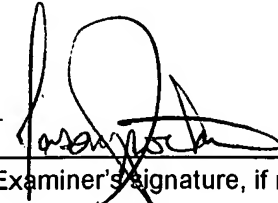Identification of prior art discussed: *Kasuya US Patent No. 6,077,304*.

Agreement with respect to the claims f)☐ was reached.   g)☐ was not reached.   h)☒ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *See attached*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's Signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)
In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
    (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

SUBSTANCE OF INTERVIEW

Mr. Tim Lehner provided a summary of the prior art. Mr. Lehner described two methods known in the prior art:

1. A complete transistor level netlist including all necessary parameters for simulating a circuit block

2. An abstract model that trades generality and accuracy for opaqueness

The invention was described by Mr. Lehner as novel in that the invention combines an opaque or "black box" model, which protects confidential or secret information, with the generality and accuracy of the complete transistor level netlist.

The invention was described as providing a compiled binary object of the circuit model. The compiled binary object makes calls to the simulator to produce simulated results. The invention is not a simulator which calls a library, but rather a circuit model which drives the simulation system. The invention, while hiding the internal details of the circuit block, can take any waveform as input and produce the corresponding output and can be coupled to any load circuitry. The invention can take simultaneous input signals and produce an output signal that reflects all the input signals.

Mr. Lehner indicated that both methods 1. and 2. summarized above are mentioned in US Patent No. 6,077,304 (column 1, lines 46-41; column 1, lines 43-46; and column 4, lines 33-39).

Facsimile Transmission Form

To:

From:

Message:　　　FAX

Proposed Agenda for Interview:

Re: Discussion of 10/063,142 and 10/063,214

Date: Tuesday, March 28, 2006

Time: 2:00pm - 3:00pm EST

Venue: Teleconference

Dial: 866-744-0083

Passcode: 6271586#

Participants: Riyon Harding, Jason Proctor, Tim Lehner

Fax: 571.273.3713

Discussion:

1. Overview of prosecution history for 10/063, 142 and 10/063,214

2. '142 Claims are directed towards a system for and method of building a black box circuit model and method of simulating a circuit using the black box circuit model. '214 Claims are directed towards the black box circuit model apparatus.

3. Fundamental properties of the circuit module in the invention, which are not represented by the prior art nor the combination of the cited references:

    a- The circuit module is a compiled loadable object, which makes calls as needed to the simulator.

    b- The circuit module is a self-contained entity, with definite and limited I/O ports in/out of the circuit.

    c- The circuit module is relocatable within a larger circuit design.

    d- The circuit module is opaque: the internal details of the circuit remain hidden.

    e- The circuit module represents a circuit, which provides simulated circuit data as a function of input value, output value, and the load value concurrently.

Current models are not based on a function of all three parameters simultaneously.

4. Proposed amendments to claims according to Examiner's arguments that these limitations were implied but not explicitly stated in the claims and to put the application in condition for allowance:

Claim 1. System claim: "A computerized simulation system for simulating a integrated circuit, wherein the integrated circuit comprises at least one black box circuit whose details are hidden, comprising:"

a simulator module comprising an API wherein said API comprises at least one function and wherein said simulator module uses said function to define a portion of the black box first circuit and wherein said function is recorded as a recorded function and said recorded function, when called during a simulation, reproduces a behavior corresponding to the black box circuit;

a code module which is created by a program compiler, which compiles comprises a compilation of said a plurality of recorded functions to form the code module, wherein the code module makes calls to the simulator module during operation; and

an interface between said code module and a user program wherein a user defines said code module inputs, outputs, and load parameters.

Claim 10. A method of modeling a black box circuit so that the circuit details remain hidden then simulating the circuit"

providing a simulator module comprising an API having at least one a plurality of functions function;

defining a ~~first~~ <u>black box</u> circuit by executing said functions;

recording a plurality of said functions used by said simulator module during said step of defining said ~~first~~ <u>black box</u> circuit <u>to create a plurality of recorded functions</u>;

compiling said recorded functions together to create a circuit code module, <u>wherein the code module makes calls to the simulator module during operation</u>;

adding an interface to said code module which provides access to said code module from a user program;

linking said compiled code module to a circuit simulator; and

assigning inputs, outputs and load parameters to said code module by calling said code module through said interface.

Claim 16. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for modeling <u>a black box circuit</u> and <u>then</u> simulating ~~a~~ <u>the black box</u> circuit using a simulator ~~to model an IC~~, the method steps comprising:

providing a simulator module comprising an API having ~~at least one~~ <u>a plurality of functions</u> ~~function~~;

defining a ~~first~~ <u>black box</u> circuit by executing said <u>plurality of</u> functions;

recording ~~a plurality of said~~ <u>said plurality of</u> functions <u>into a plurality of recorded functions</u> used by said simulator module during said step of defining said ~~first~~ <u>black box</u> circuit;

compiling said recorded functions to create a code module, <u>wherein the code module makes calls to the simulator module during operation;</u>

adding an interface to said code module which provides access to said code module from a user program;

linking said compiled code module to a circuit simulator; and

assigning inputs, outputs and load parameters to said code module by calling said circuit code module through said interface.

5. Request to withdraw claims 21 – 27 from 10/063,142 and put them into 10/063,214 because '214 has claims directed toward the circuit model and not the method of building and using the model.

6. Recommendations from Examiner on how to best proceed with responses and documentation.

7. Adjourn.

Chair: Riyon Harding
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rharding@us.ibm.com
fax: 802.769.8938

Note: I will be out of the office until the 27th. Please send me an email or leave a voice message as to whether you are amenable to having this meeting. Thanks!